Claims

[c1]   A method for processing a request comprising the steps of: determining that an identifier includes a fictitious domain name (FDN); and, requesting a network resource from at least a portion of said identifier.

[c2]   A method, as set forth in claim [c1] , wherein said step of determining that said identifier includes said FDN includes the step of determining that said identifier includes a domain name that is not a valid domain name (VDN).

[c3]   A method, as set forth in claim [c1] , wherein said step of determining that said identifier includes said FDN includes the step of determining that said identifier includes a domain name having at least one domain level alias.

[c4]   A method, as set forth in claim [c1] , wherein said identifier includes a domain name having a highest level domain (HLD) and said step of determining that said identifier includes said FDN includes the step of determining whether said HLD is resolvable.

[c5]   A method, as set forth in claim [c4] , wherein said step of determining whether said HLD is resolvable includes the step of comparing said HLD to a list of resolvable top level domains (TLDs).

[c6]   A method, as set forth in claim [c5] , wherein said step of comparing said HLD to said list of TLDs includes the step of one of a comparing said HLD without processing a DNS query, comparing said HLD before processing a DNS query, comparing said HLD while processing a DNS query, and comparing said HLD after processing a DNS query.

[c7]   A method, as set forth in claim [c6] , wherein said step of comparing said HLD without processing said DNS query, comparing said HLD before processing said DNS query, and said step of comparing said HLD after processing said DNS query includes the step of performing at least a portion of said step of comparing said HLD to said list of TLDs with a search function.

[c8]   A method, as set forth in claim [c6] , wherein said step of comparing said HLD during said DNS query includes the step of comparing said HLD to said list of TLDs in one of a root zone file and zone file cache.

[c9]   A method, as set forth in claim [c5] , wherein said HLD that is determined resolvable is a TLD and said HLD that is determined not resolvable is a top level domain alias (TLDA).

[c10]   A method, as set forth in claim [c5] , wherein a valid domain name (VDN) having a resolvable TLD is a real domain name (RDN).

[c11]   A method, as set forth in claim [c4] , further including the step of determining whether said HLD is multilingual in response to determining that said HLD is not resolvable.

[c12]   A method, as set forth in claim [c11] , further including the step of determining whether said HLD is a representation of a resolvable TLD in response to determining that said HLD is multilingual, wherein said representation of said HLD is denoted in a character set other than that of a limited 7-bit ASCII character set.

[c13]   A method, as set forth in claim [c12] , wherein said HLD that is determined a representation of a resolvable TLD is a multilingual top level domain (MTLD) and said HLD that is determined not a representation of a resolvable TLD is a multilingual top level domain alias (MTLDA).

[c14]   A method, as set forth in claim [c13] , wherein said domain name having said MTLD is a real multilingual domain name (RMDN) and said domain name having said MTLDA is a fictitious multilingual domain name (FMDN).

[c15]   A method, as set forth in claim [c14] , wherein said identifier includes a RMDN, further including the step of processing said RMDN.

[c16]   A method, as set forth in claim [c14] , wherein said identifier includes a FMDN, further including the steps of generating a RMDN from said FMDN and processing said RMDN.

[c17]   A method, as set forth in claim [c1] , wherein said step of requesting said network resource from said identifier includes the step of accessing said network resource from said identifier.

[c18]   A method, as set forth in claim [c17] , wherein said step of accessing said network resource from said identifier includes the step of locating said network resource from said identifier.

[c19]   A method, as set forth in claim [c18] , wherein said step of locating said network resource from said identifier includes the step of determining whether said FDN from said identifier is resolvable in the domain name system (DNS).

[c20]   A method, as set forth in claim [c19] , wherein said identifier is a first identifier and said network resource can not be located from said first identifier, further including the steps of generating a second identifier and locating the network resource from said second identifier.

[c21]   A method, as set forth in claim [c1] , wherein said identifier is a first identifier and said step of determining that said first identifier includes said FDN includes the steps of generating a second identifier and locating the network resource from said second identifier.

[c22]   A method, as set forth in claim [c21] , wherein said step of generating said second identifier includes the step of updating a name tracking database with one of a first identifier and second identifier.

[c23]   A method, as set forth in claim [c21] , wherein said step of generating said second identifier includes the step of determining whether said step of generating said second identifier is authorized.

[c24]   A method, as set forth in claim [c23] , wherein said step of determining whether said step of generating said second identifier is authorized includes the step of comparing said first identifier to one of a template, GO LIST, authorization table, name translation table, and registry.

[c25]   A method, as set forth in claim [c23] , further including the step of determining whether to register for authorization in response to determining said step of generating said second identifier is not authorized.

[c26]   A method, as set forth in claim [c25] , further including the step of registering said first identifier as a FDN or FMDN for authorization when registration is chosen, and the step of determining whether to process a search request when registration is not chosen.

[c27]   A method, as set forth in claim [c26] , wherein said step of registering said first identifier as a FDN or FMDN includes the step of determining whether to include said FDN or said FMDN in a directory listing service.

[c28]   A method, as set forth in claim [c26] , further including the step of pre-registering said first identifier as a prospective RDN in response to the step of registering said first identifier as a FDN for authorization.

[c29]   A method, as set forth in claim [c26] , further including the step of pre-registering said first identifier as a prospective RMDN in response to the step of registering the first identifier as a FMDN for authorization.

[c30]   A method, as set forth in claim [c26] , further including the step of determining whether to process a search request after processing said registration request.

[c31]   A method, as set forth in claim [c26] , wherein said step of determining whether to process a search request includes the step of determining whether a search may be constructed from said first identifier.

[c32]   A method, as set forth in claim [c30] , further including the steps of constructing a search from said first identifier determined to allow a search, processing said search constructed from said first identifier, and presenting the results of said search constructed from said first identifier.

[c33]   A method, as set forth in claim [c21] , wherein said first identifier includes a FMDN and said second identifier includes a RMDN and said step of

generating said second identifier includes the step of selecting from one of a resolvable TLD, resolution method, and component data.

[c34]   A method, as set forth in claim [c21] , wherein said first identifier includes either a FDN or FMDN and said second identifier includes a RDN and said step of generating said second identifier includes the step of selecting from one of a resolvable TLD, resolution method, and component data.

[c35]   A method, as set forth in claim [c34] , wherein said component data is one of a namespace identifier, naming authority, namespace provider, resolver service, delimiters mappings, mapping rules, rewrite rules, scheme, host, domain, TLD, port, path, query, fragment, and partial uniform resource identifier (PURI).

[c36]   A method, as set forth in claim [c34] , wherein said step of selecting said resolvable TLD includes the step of choosing which resolvable TLD of a table of resolvable TLDs is selected to construct said RDN from said first identifier.

[c37]   A method, as set forth in claim [c34] , wherein said step of selecting said resolution method includes the step of choosing which resolution method from a table of resolution methods.

[c38]   A method, as set forth in claim [c37] , wherein said table of resolution methods includes one of a rotation method, truncation method, replace method, path method, delimit method, reverse method, append method, prepend method, substitute method, query method, custom method, and registry provider method.

[c39]   A method, as set forth in claim [c21] , wherein said second identifier includes one of a predetermined RDN and at least a portion of said first identifier.

[c40]   A method, as set forth in claim [c39] , wherein said second identifier includes said predetermined RDN and said at least a portion of said first identifier is one of a subdomain of said predetermined RDN and path of said predetermined RDN.

[c41]   A method, as set forth in claim [c21] , wherein said second identifier includes at least a portion of said first identifier and one of a PURI prefix and PURI suffix.

[c42]   A method, as set forth in claim [c21] , wherein said first identifier is a FDN of the form "SLD.TLDA" and said second identifier is of one of the form "SLD.TLD", "SLD.TLD/TLDA", "TLDA.SLD.TLD", "SLD.TLDA.TLD", "SLD.TLD/A", "SLD.TLD/?query=TLDA", "SLD.TLDA.RDN", "RDN/SLD.TLDA", and "RDN/SLD/TLDA".

[c43]   A method, as set forth in claim [c21] , wherein said first identifier is a FMDN of the form "SLD.MTLDA" and said second identifier is of one of the form "SLD.TLD", "SLD.TLD/MTLDA", "MTLDA.SLD.TLD", "SLD.MTLDA.TLD", "SLD.MTLD/A", "SLD.TLD/?query=MTLDA", "SLD.MTLDA.RDN", "RDN/SLD.MTLDA", and "RDN/SLD/MTLDA".

[c44]   A method, as set forth in claim [c21] , wherein said step of generating said second identifier includes the steps of determining that said first identifier includes a port alias, determining whether said port alias includes a resolvable TLD, generating said second identifier having said resolvable TLD in response to determining that said port alias includes a resolvable TLD, and generating said second identifier including said port alias as a query in response to determining that said port alias does not include a resolvable TLD.

[c45]   A method, as set forth in claim [c21] , wherein said step of generating said second identifier includes the step of generating an identifier for each resolution method from a plurality of resolution methods.

[c46]
          A method, as set forth in claim [c45] , further including the steps of determining the resolvability of all said generated identifiers, filtering all identifiers from said generated identifiers that are determined not resolvable, determining that there are a plurality of unfiltered identifiers, generating a hyperlink for each said unfiltered identifier, and presenting

each said generated hyperlink.

[c47]   A method, as set forth in claim [c21] , wherein said first identifier includes a
            TLDA having a postal code and said step of generating said second identifier
            includes the steps of determining whether to process said postal code as a
            TLDA or search request, generating said second identifier including said
            postal code as a query in response to determining that said postal code is to
            be processed as said search request, retrieving from a postal code database
            one of a resolvable country code top level domain (ccTLD) and at least one
            subdomain corresponding to said postal code in response to determining
            that said postal code is to be processed as said TLDA, and generating said
            second identifier by replacing said TLDA of said first identifier with any
            retrieved subdomains and said ccTLD.

[c48]   A method, as set forth in claim [c47] , wherein said first identifier includes a
            TLDA having a zip code is of the form "host.tlda" and said step of generating
            said second identifier includes the steps of retrieving from a zip code
            database at least one city and state corresponding to said zip code and
            generating an identifier for each retrieved said city and said state by
            replacing said TLDA with said city, said state, and a ".us" ccTLD, wherein
            each said second identifier is of the form "host.city.state.us".

[c49]   A method, as set forth in claim [c47] , wherein said first identifier includes a
            TLDA having a postal code and a port alias having a ccTLD and said step of
            generating said second identifier includes the step of selecting said ccTLD
            from said port alias.

[c50]   A method, as set forth in claim [c21] , wherein said step of generating said
            second identifier includes the step of retrieving information from one of a
            user modifiable configuration settings, template, GO LIST, name translation
            table, and registry.

[c51]
            A method, as set forth in claim [c50] , wherein said step of retrieving
            information from said user modifiable configuration settings includes the

step of selecting a next step to be performed from one of a determining whether to generate said second identifier for each possible resolution method, determining whether to process a detected port alias, determining whether to process a detected postal code as a TLDA or search request, determining whether to select a resolvable TLD from a default resolvable TLD or table of resolvable TLDs, and choosing which resolution method from a table of resolution methods.

[c52]   A method, as set forth in claim [c50] , said step of generating said second identifier includes the step of accessing said template from a search function.

[c53]   A method, as set forth in claim [c52] , wherein said search function is an autosearch.

[c54]   A method, as set forth in claim [c52] , wherein said template includes at least one of a namespace template, redirection template, prefix template, identifier generation template, identifier registration template, resolver selection template, resolution method template, calculator template, and numerical identifier template.

[c55]   A method, as set forth in claim [c21] , further including the step of requesting said network resource from said second identifier.

[c56]   A method, as set forth in claim [c55] , wherein said step of requesting said network resource includes the step of receiving content from said network resource corresponding to one of a first identifier and second identifier, wherein said second identifier includes one of a predetermined RDN and at least a portion of said first identifier.

[c57]   A method, as set forth in claim [c56] , wherein said content includes one of a redirect command to a third identifier and advertising corresponding to said first identifier.

[c58]

A method, as set forth in claim [c1] , further including the step of

determining whether said identifier includes one of a prefix delimiter, suffix delimiter, and domain name.

[c59] A method, as set forth in claim [c58] , further including the step of determining whether to process a search request in response to determining that said identifier does not include one of a prefix delimiter, suffix delimiter, and domain name.

[c60] A method, as set forth in claim [c58] , further including the step of determining which operative function to perform corresponding to said identifier in response to determining that said identifier includes one of a prefix delimiter and suffix delimiter.

[c61] A method, as set forth in claim [c58] , wherein said identifier is of one of the form ".TLD", ".TLDA", ".MTLD", ".MTLDA", ".XLD.", and "SLD." and said step of determining which operative function to perform includes the step of requesting content from a directory service, wherein said directory service content corresponds to said identifier.

[c62] A method, as set forth in claim [c61] , wherein said directory service is a vertical market portal and said content includes advertising, coupons, rebates, discounts, and branding of products and services that correspond to one of a first identifier and vertical market.

[c63] A method, as set forth in claim [c60] , wherein said step of determining which operative function to perform includes the step of selecting said operative function corresponding to said prefix delimiter from one of a calculation, page, instant message, e-mail, phone call, fax, payment, and WHOIS request.

[c64] A method, as set forth in claim [c63] , wherein said identifier includes said prefix delimiter prepended to said domain name, wherein said prefix delimiter is one of a "!" delimiter corresponding to said instant message, "@" delimiter corresponding to said e-mail, "#" delimiter corresponding to said phone call, "*" delimiter corresponding to said fax, "$" delimiter

corresponding to said payment, and "?" delimiter corresponding to said WHOIS request.

[c65]   A method, as set forth in claim [c63] , wherein said identifier is received from a location field and includes said prefix delimiter and a mathematical calculation having at least one operator and argument corresponding to said calculation.

[c66]   A method, as set forth in claim [c58] , further including the steps of determining that said identifier is a E.164 number, accessing an ENUM template from a search function, generating a ENUM domain name from at least a portion of said identifier and said ENUM template, and locating at least one said network resource corresponding to said ENUM domain name.

[c67]   A method, as set forth in claim [c66] , wherein said search function is an autosearch.

[c68]   A method, as set forth in claim [c1] , wherein said step of determining that said identifier includes said FDN includes the step of performing at least a portion of said step of determining that said identifier includes said FDN with a search function.

[c69]   A method, as set forth in claim [c68] , wherein said search function is an autosearch.

[c70]   A method, as set forth in claim [c21] , wherein said step of generating said second identifier includes the step of performing at least a portion of said step of generating said second identifier with a search function.

[c71]   A method, as set forth in claim [c70] , wherein said search function is an autosearch.

[c72]   A method, as set forth in claim [c21] , wherein said step of locating said network resource from said second identifier includes the step of performing at least a portion of said step of locating said network resource with a search function.

[c73]   A method, as set forth in claim [c72] , wherein said search function is an autosearch.

[c74]   A method, as set forth in claim [c21] , wherein one of a first identifier and second identifier is a uniform resource identifier.

[c75]   A method, as set forth in claim [c74] , wherein said uniform resource identifier is a uniform resource locator.

[c76]   A method, as set forth in claim [c1] , further including the step of receiving said identifier from internal automation, external automation, activation of a hyperlink, network resource redirection, and input.

[c77]   A method, as set forth in claim [c76] , wherein said step of receiving said identifier from input includes the step of inputting said identifier from a user interface element.

[c78]   A method, as set forth in claim [c77] , wherein said step of inputting said identifier from said user interface element further includes the step of inputting said identifier into one of a browser location field, text box, command line, speech to text interface, optical recognition interface, and magnetic recognition interface.

[c79]   A method, as set forth in claim [c1] , further including the steps of determining whether said identifier is resolvable in response to determining that said identifier does not include said FDN and requesting said network resource from said identifier in response to determining that said identifier is resolvable.

[c80]   A method, as set forth in claim [c79] , wherein said identifier is a first identifier further including the steps of generating a second identifier in response to determining that said first identifier includes said FDN or in response to determining that said first identifier is not resolvable and requesting said network resource from said second identifier.

[c81]   A method, as set forth in claim [c1] , wherein said FDN is one of a uniform

resource name (URN) FDN, numerical domain name (NDN), real multilingual domain name (RMDN), fictitious multilingual domain name (FMDN), postal code FDN, hybrid domain name (HDN), Keyword Domain Name (KDN), Trademark Domain Name (TDN), and Domain Alias Domain Name (DADN).

[c82]   A method, as set forth in claim [c81] , wherein said NDN is one of a ENUM FDN, SSN FDN, UPC FDN, CC FDN, and ISBN FDN.

[c83]   A method, as set forth in claim [c82] , wherein said NDN is said ENUM FDN, further including the steps of accessing an ENUM template from a search function, generating an ENUM domain name from said ENUM FDN and said ENUM template, and locating at least one said network resource corresponding to said ENUM domain name.

[c84]   A method, as set forth in claim [c83] , wherein said ENUM FDN is not a complete ENUM FDN and said step of generating an ENUM domain name from said incomplete ENUM FDN includes the step of completing said incomplete ENUM FDN by retrieving at least one of an ENUM prefix, area code, and local exchange from one of a template, registry, component data, metadata, and configuration settings.

[c85]   A method, as set forth in claim [c83] , wherein said search function is an autosearch.

[c86]   A method, as set forth in claim [c1] , wherein said FDN includes a top level domain alias (TLDA) and said step of determining that said identifier includes said FDN includes the step of determining that said FDN can be translated into an IP address from a DNS query.

[c87]   A method, as set forth in claim [c86] , wherein said step of determining that said FDN can be translated into an IP address includes the step of accessing at least one resource record from one of an at least one zone file and at least one file cache.

[c88]   A method, as set forth in claim [c87] , wherein said zone file is a root zone

file.

[c89] A method, as set forth in claim [c87] , wherein said at least one resource record is a wildcard resource record.

[c90] A method, as set forth in claim [c87] , wherein said IP address corresponds to said network resource wherein said network resource is adapted to determine which namespace provider of a plurality of namespace providers can process said FDN.

[c91] A method, as set forth in claim [c90] , wherein said network resource manages a primary virtual zero level domain (PVZLD).

[c92] A method, as set forth in claim [c91] , wherein said namespace provider is a naming authority to at least one secondary virtual zero level domain (SVZLD) and said PVZLD is adapted to redirect to said at least one SVZLD in response to resolving said DNS query including said FDN having said TLDA.

[c93] An apparatus comprising: a processor; a memory in operative association with said processor; means for determining that an identifier includes a fictitious domain name (FDN); and means for requesting a network resource from at least a portion of said identifier.

[c94] A computer program product comprising computer readable program code stored on a computer readable medium, the program code adapted to execute the method for determining that an identifier includes a fictitious domain name (FDN), and requesting a network resource from at least a portion of said identifier.

[c95] A DNS server, comprising: a root zone file; and, a resource record adapted to resolve a DNS query including a domain name having a top level domain alias (TLDA).

[c96] A DNS server, as set forth in claim [c95] , wherein the DNS server is one of a single authoritative root server, alternative root server, and virtual inclusive root server.

[c97]   A DNS server, as set forth in claim [c95] , wherein said resource record is a wildcard resource record.

[c98]   A DNS server, as set forth in claim [c95] , wherein said resource record includes an IP address.

[c99]   A DNS server, as set forth in claim [c98] , wherein said IP address corresponds to a network resource adapted to determine which namespace provider of a plurality of namespace providers can process said domain name having said TLDA.

[c100]   A DNS server, as set forth in claim [c99] , wherein said network resource is adapted to manage a primary virtual zero level domain (PVZLD).

[c101]   A DNS server, as set forth in claim [c100] , wherein said namespace provider is a naming authority to at least one secondary virtual zero level domain (SVZLD) and said PVZLD is adapted to redirect to said at least one SVZLD in response to said resolved DNS query including said domain name having said TLDA.

[c102]   A network navigation device, comprising: a navigation component that attempts to complete a navigation request from an identifier; and, a search component adapted to generate a non-search request from at least a portion of said identifier in response to said navigation component that can not complete said navigation request.

[c103]   A network navigation device, comprising: a navigation component that receives a navigation request having an identifier; a search component that intercepts said identifier; said search component adapted to determine that said identifier includes a fictitious domain name (FDN) and generate a search request from at least a portion of said identifier having said FDN.

[c104]
          A method comprising the steps of: determining that a fictitious domain name (FDN) is available for registration; registering said FDN; and, determining whether to pre-register said FDN as a prospective real domain

name (RDN).

[c105]   A method, as set forth in claim [c104] , wherein said FDN is a fictitious multilingual domain name (FMDN) and said prospective RDN is a prospective real multilingual domain name.

[c106]   A method comprising the steps of: selecting a first domain name having a resolvable top level domain; generating a second domain name having a top level domain alias from said first domain name; and, distributing said second domain name through at least one media source.

[c107]   A method comprising the steps of: determining whether a first identifier includes a domain name; determining whether said domain name is fictitious; determining whether said first identifier is resolvable in response to determining that said domain name is not fictitious or in response to determining that said first identifier does not include said domain name; requesting a network resource from said first identifier in response to determining that said first identifier is resolvable; generating a second identifier in response to determining that said domain name is fictitious or in response to determining that said first identifier is not resolvable; and, requesting said network resource from said second identifier.

[c108]   A method for processing a network resource from a first identifier having an unresolvable domain name comprising the steps of: determining whether the domain name is fictitious; processing a registration request from at least a portion of the first identifier in response to determining that the domain name is not fictitious; generating a second identifier in response to determining that the domain name is fictitious; and, requesting the network resource from said second identifier.

[c109]
          A method, as set forth in claim [c108] , further including the step of determining that the network resource can not be accessed in response to requesting the network resource from said second identifier and processing a fictitious domain name registration request having at least a portion of one

of a first identifier and second identifier.